

HELLTECH

Work Order ID 153453

\*153453\*

Page 1

Monday, November 21, 2016 9:28:18 AM

Item ID: D350-636-012

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Stop

\*NS2\*

Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 12/5/2016 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals:

Process Plan:

DAS  
21  
9-89

Date: NOV 21 2016

Tooling:

Date:

Run Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

DAS  
6  
9-89

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D2750-042

G

D3492

E

DEC 20 2016

100

Document Control

0.00

\*100\*

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

record fwd angle:

90°

Photocopy blue file and type labels per PPP D350-636-012 CHG 007

DAS  
27  
9-89

DAS  
27  
9-89

1 0 16-11-23

DAS  
19  
9-89

DAS  
19  
9-89

**Work Order ID 153453**

Monday, November 21, 2016 9:28:18 AM

**\*153453\***

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Item ID: D350-636-012

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016 Start Qty: 1.00 **\*1\***

Cust Item ID:

Required Date: 12/5/2016 Req'd Qty: 1.00 **\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                                                                                                                                                                                     | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 110                            | Skidtubes                                                                                                                                                                                                    | 0.00                 |         |        |              |               |               |                  |                |
| <b>*110*</b>                   |                                                                                                                                                                                                              |                      |         |        |              |               |               |                  |                |
| Skidtubes                      | <b>Memo</b>                                                                                                                                                                                                  | 0.17                 |         |        |              |               |               |                  |                |
| Skidtubes                      | 1- Pick D2600-3 Bent ✓                                                                                                                                                                                       |                      |         |        |              |               |               |                  |                |
|                                | 2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside, AFT end per dwg D2750                                                                                                                |                      |         |        |              |               |               |                  |                |
|                                | 3- Drill pilot holes for blade fitting bolt holes using DT8983. Start with 3/16", then open to 0.500" using center drill then ream holes using 0.500" reamer. PIN first side. Repeat process on second side. |                      |         |        |              |               |               |                  |                |
|                                | ***ENSURE PROPER POSITIONING FWD BEND MUST BE FACING UP WHEN DRILLING FIRST SIDE***                                                                                                                          |                      |         |        |              |               |               |                  |                |
|                                | Drill pilot holes as per Dwg D2750 sheet 4 (D2750-2 details). Drill using drill Jig DT8150 & DT8863A for second side only DT8863B for first side (detail K)                                                  |                      |         |        |              |               |               |                  |                |
|                                | 4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting. Open to 0.500" using hole saw. VERIFY AND RECORD FWD BEND ANGLE.                                                   |                      |         |        |              |               |               |                  |                |
|                                | 6- Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297".                                                                                                                            |                      |         |        |              |               |               |                  |                |
|                                | 7- Open up holes of Detail J to 0.297" (total of 2 holes per side)                                                                                                                                           |                      |         |        |              |               |               |                  |                |
|                                | 8- Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004                                                                                                        |                      |         |        |              |               |               |                  |                |

16-11-22 DT DL

16-11-23 DL

16-11-23



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**Item ID:** D350-636-012**Accept****\*N900040100\*****Setup Start \*NS1\*****Revision ID:****Stop \*NS2\*****Item Name:** Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.**Start Date:** 11/21/2016 **Start Qty:** 1.00**\*1\*****Cust Item ID:****Required Date:** 12/5/2016 **Req'd Qty:** 1.00**\*1\*****Customer:****Reference:**

**Approvals:** **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
**QC:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **SPC (Y/N):** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Run Start \*NR1\***  
**Stop \*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|-----------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 140                            | Chemical Conversion Coat per QSI005 4.1 | 0.00                 |         |        |              | 1             | Ø             | 16-11-24         |                |
| <b>*140*</b>                   |                                         |                      |         |        |              |               |               |                  |                |
| HandFinish                     | <b>Memo</b>                             | 0.06                 |         |        |              |               |               |                  |                |
| Hand Finishing                 |                                         |                      |         |        |              |               |               |                  |                |
| 150                            | QC7-Inspect Chemical Conversion Coat    | 0.00                 |         |        |              | 1             | Ø             | 16-11-25         |                |
| <b>*150*</b>                   |                                         |                      |         |        |              |               |               |                  |                |
| QC                             | <b>Memo</b>                             | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |                                         |                      |         |        |              |               |               |                  |                |

DAS  
19  
9-09  
DAS  
18  
9-09



**Work Order ID 153453**

Monday, November 21, 2016 9:28:18 AM

**\*153453\***

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Item ID: D350-636-012

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 12/5/2016 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

160

0.00

**\*160\***

Skidtubes

Skidtubes

Skidtubes

Memo

0.17

1- Open up holes of Detail L using hole saw and ground handling to 0.625"  
(total of 8 holes per side) as per dwg D2750.2- Open up holes of Detail K using hole saw to 0.750" (total of 4 holes per side)  
as per dwg D2750.

3- Open float holes using uni-bit to .500" (4 per Side)

4- Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750  
(welding instructions on sheet 9)

5- Deburr and blow out all chips from inside of tube

6- Prepare tube for welding, remove alodine as required.

7- Bond web D2739 in place as per QSI 015, let cure for 12hrs.

A/R Sikaflex-291

batch: B136093exp. date: 17-02-16**\*\*ATTN: USE I-BEAM LOCATION AID (BLADE FITTING)\*\***

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 &amp; QSI004

(welding instructions on sheet 9)

A/R Aluminum Rod

batch: M133750

9- At section AP-AP drill out x-bolt spacer to 0.404"

10-Grind welds flush as per Dwg D2750

16-11-25 *[Signature]*16-11-29 *[Signature]*

7 BE16-B-05

16-12-06 D.T. *[Signature]*

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Monday, November 21, 2016 9:28:18 AM

Item ID: D350-636-012

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**\*N1900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 12/5/2016 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

11- Spot face ground handling holes section (total of 4 places per side) as per  
dwg D275012- Deburr holes, ensure tube is free of all scratches before sending to  
paint.

170

**\*170\***

QC

Quality Control

QC10- Inspect visual per QSI004- ground welds 0.00

Memo 0.00

DAS  
38  
9-89

DEC 07 2016

180

**\*180\***

QC

Quality Control

QC5- Inspect part completeness to step on W/O 0.00

Memo 0.00

\*\*\*VERIFY C'BOARD IS GOOD\*\*\*

DAS  
38  
9-89

DEC 07 2016

# Work Order ID 153453

**\*153453\***

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Monday, November 21, 2016 9:28:18 AM

Item ID: D350-636-012 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.  
Start Date: 11/21/2016 Start Qty: 1.00 **\*1\*** Cust Item ID:  
Required Date: 12/5/2016 Req'd Qty: 1.00 **\*1\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                                                              | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp                   |
|--------------------------------|---------------------------------------------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------------------------|
| 190                            | Pressure Wash per QSI005 4.3                                                          | 0.00                 |         |        |              |               |               |                  |                                  |
| <b>*190*</b>                   |                                                                                       |                      |         |        |              |               |               |                  |                                  |
| HandFinish                     | Memo                                                                                  | 0.07                 |         |        |              |               |               |                  |                                  |
| Hand Finishing                 | Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.                      |                      |         |        |              |               |               |                  | 2016/12/10<br>BEB                |
| 200                            |                                                                                       | 0.00                 |         |        |              |               |               |                  |                                  |
| <b>*200*</b>                   |                                                                                       |                      |         |        |              |               |               |                  |                                  |
| SprayPaint                     | Memo                                                                                  | 0.07                 |         |        |              |               |               |                  |                                  |
| Spray Painting                 | 1- PRIME AS PER DWG AND QSI 005 4.2<br>PRIMER PRC DESOTO 515X349 BATCH: <u>135929</u> |                      |         |        |              |               |               |                  |                                  |
|                                | 2- PAINT WHITE AS PER DWG AND QSI 005 4.2<br>PAINT BATCH: <u>136040</u>               |                      |         |        |              |               |               |                  |                                  |
| 210                            | QC14- Inspect Spray Paint                                                             | 0.00                 |         |        |              |               |               |                  |                                  |
| <b>*210*</b>                   |                                                                                       |                      |         |        |              |               |               |                  |                                  |
| QC                             | Memo                                                                                  | 0.00                 |         |        |              |               |               |                  |                                  |
| Quality Control                | Inspect for foreign object per QSI 024                                                |                      |         |        |              |               |               |                  | 1RM d JH 16/12/16<br>DAS 15 9-89 |



**Work Order ID 153453****\*153453\***

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Monday, November 21, 2016 9:28:18 AM

**Item ID:** D350-636-012**Accept****\*N900040100\*****Setup Start****\*NS1\*****Revision ID:****Stop****\*NS2\*****Item Name:** Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.**Start Date:** 11/21/2016 **Start Qty:** 1.00**\*1\*****Cust Item ID:****Required Date:** 12/5/2016 **Req'd Qty:** 1.00**\*1\*****Customer:****Reference:****Approvals:** **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_**Run Start****\*NR1\*****QC:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **SPC (Y/N):** \_\_\_\_\_ **Date:** \_\_\_\_\_**Stop****\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

230

0.00

**\*230\***

HandFinishing

HandFinish

**Memo**

0.19

Hand Finishing

1-Install inserts as per dwg D2750

2-Inspect for Foreign Objects

3-Install blade fitting D3488-042, wearshoes and ground handling hardware as per dwg D2750

SIKA FLEX 241

BATCH: 11136043EXP DATE: 12/09170598 11135385 1810.1

4-assemble o'ring to plug as per dwg D3492 and apply o'ring lube

A/R 55-o'ring lube batch: 11135473

5-Coat all exposed fasteners with "LPS Procyon"

batch: 111356401124 d 21 16/12/11

240

QC5- Inspect part completeness to step on W/O

0.00

**\*240\***

QC

**Memo**

0.00

Quality Control

① 16-12-20 PD



**Work Order ID 153453****\*153453\***

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Monday, November 21, 2016 9:28:18 AM

**Item ID:** D350-636-012**Accept****\*N900040100\*****Setup Start****\*NS1\*****Revision ID:****Stop****\*NS2\*****Item Name:** Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.**Start Date:** 11/21/2016 **Start Qty:** 1.00**\*1\*****Cust Item ID:****Required Date:** 12/5/2016 **Req'd Qty:** 1.00**\*1\*****Customer:****Reference:****Approvals:****Process Plan:** \_\_\_\_\_**Date:** \_\_\_\_\_**Tooling:** \_\_\_\_\_**Date:** \_\_\_\_\_**Run Start****\*NR1\*****QC:** \_\_\_\_\_**Date:** \_\_\_\_\_**SPC (Y/N):** \_\_\_\_\_**Date:** \_\_\_\_\_**Stop****\*NR2\*****Sequence ID/  
Work Center ID****Operation  
Description****Set Up/  
Run Hours****Tool ID****Tool #****Plan  
Code****Accept  
Qty****Reject  
Qty****Reject  
Number****Insp.  
Stamp**

250

Pick Kit

0.00

**\*250\***

Packaging

**Memo**

0.00

Packaging

IX

DEC 20 2016

26/9  
9-89DAS  
28  
9-89

260

QC4- 100% Inspect kits for completeness

0.00

**\*260\***

QC

**Memo**

0.01

Quality Control

DAS  
27  
9-89

DEC 20 2016

270

Packaging

0.00

**\*270\***

Packaging

**Memo**

0.00

Packaging

Package as per PPP D350-636-012  
Location PG072DAS DAS  
28 27  
9-89 9-89

DEC 20 2016

**Work Order ID 153453****\*153453\***

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Monday, November 21, 2016 9:28:18 AM

**Item ID:** D350-636-012**Accept****\*N900040100\*****Setup Start****\*NS1\*****Revision ID:****Stop****\*NS2\*****Item Name:** Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.**Start Date:** 11/21/2016 **Start Qty:** 1.00**\*1\*****Cust Item ID:****Required Date:** 12/5/2016 **Req'd Qty:** 1.00**\*1\*****Customer:****Reference:****Approvals:****Process Plan:** \_\_\_\_\_**Date:** \_\_\_\_\_**Tooling:** \_\_\_\_\_**Date:** \_\_\_\_\_**Run Start****\*NR1\*****QC:** \_\_\_\_\_**Date:** \_\_\_\_\_**SPC (Y/N):** \_\_\_\_\_**Date:** \_\_\_\_\_**Stop****\*NR2\*****Sequence ID/  
Work Center ID****Operation  
Description****Set Up/  
Run Hours****Tool ID****Tool #****Plan  
Code****Accept  
Qty****Reject  
Qty****Reject  
Number****Insp.  
Stamp**

280

QC21- Final Inspection - Work Order Release

0.00

**\*280\***

QC

**Memo**

0.02

Quality Control

DAS  
21  
9-89

DEC 21 2016

DAS  
21  
9-89

DEC 21 2016

# Picklist Print

Monday, November 21, 2016 9:28:21 AM

Page 1

Work Order ID: 153453

**\*153453\***

Parent Item: D350-636-012

**\*D350-636-012\***

Parent Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/5/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev: I02.09.25 Rearranged procedure steps KJ  
IPP Rev: J 06-03-29 As per Rev D EC IPP REV: K  
AS PER REV F JLM 13-08-22 VERIFIED BY: DD  
IPP Rev: K 06-07-13 As per dsi9343 EC  
IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC  
IPP Rev: M 08-04-22 update steps 4, 13 DD verified by: EC  
IPP Rev: N 08-09-23 revF as per dwg DD verified by: ec IPP Rev: O  
10.06.22 revise seq110 DD verf: EC IPP Rev: P 10.10.01 as  
per IIN revH DD verf: EC IPP REV: Q 13.08.27 PER ECN13-  
594 DD VERF: JLM

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|

D2600-3-BENT-RH

Manufactured

No

110

Each

7.0000

1

1

**\*D2600-3-BENT-RH\***

Extrusion Bent RH

\*\*

16-11-22 DT

Location

Loc Qty

Loc Code

LG002

7

150499

7

D2744

Manufactured

No

110

Each

22.0000

1

1

**\*D2744\***

Cap

\*\*

BE  
16-11-23

Location

Loc Qty

Loc Code

LG001

22

145790

12

150653

10

D2739

Manufactured

No

160

Each

9.0000

1

1

**\*D2739\***

350 I Beam

\*\*

16-11-29 DT

Location

Loc Qty

Loc Code

LG002

9

153678  
150718

9

# Picklist Print

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Parent Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/5/2016

Start Qty: 1.00

Required Qty: 1.00

D2743

Manufactured No

160

Each

134.0000

8

8

**\*D2743\***

Crossbolt Spacer

\*\*

BE1612-05

Location

Loc Qty

Loc Code

LG001

134

147561

8

150407

126

8

D3490-3

Manufactured No

160

Each

31.0000

4

4

**\*D3490-3\***

Cross Bolt Spacer

\*\*

BE1612-05  
B153679 x4

Location

Loc Qty

Loc Code

LG001

31

137807

2

140801

1

150497

28

D3490-1

Manufactured No

160

Each

45.0000

4

4

**\*D3490-1\***

Cross Bolt Spacer

\*\*

BE1612-05  
B153680 x4

Location

Loc Qty

Loc Code

LG001

45

134019

4

150496

41

D3631-1

Manufactured No

230

Each

159.0000

8

8

**\*D3631-1\***

Washer

\*\*

10112113

Location

Loc Qty

Loc Code

FP001

159

147068

7

148837

52

150675

100

B153587

x8



# Picklist Print

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**\*D350-636-012\***

Parent Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/5/2016

Start Qty: 1.00

Required Qty: 1.00

D3791-1 Manufactured No 230 Each 8.0000 1 1

**\*D3791-1\*** X

Wearpad

\*\*

B153497 (1x) 11/16/13

Location

Loc Qty

Loc Code

FP002

8

148677

8

D3793-3 Manufactured No 230 Each 17.0000 1 1

**\*D3793-3\***

Wearplate Aft

\*\*

11/16/13

Location

Loc Qty

Loc Code

FP002

17

148620

5

150138

12

B153466

11/16/13

MS21043-6 Purchased No 230 Each 87.0000 4 4

**\*MS21043-6\***

NUT

\*\*

11/16/13

Location

Loc Qty

Loc Code

FG

20

103693

20

M136295

11/16/13

FP001

57

m135470

30

m135603

2

m136047

25

ST302

10

m134817

10

# Picklist Print

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**\*153453\***

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**\*D350-636-012\***

Parent Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/5/2016

Start Qty: 1.00

Required Qty: 1.00

D3794-1

Manufactured No

230

Each

20.0000

1

1

**\*D3794-1\***

Gasket Fwd

\*\*

all 16/12/13

Location

Loc Qty

Loc Code

FP001

20

13135526

xl

142770

1

147682

1

150417

6

150695

12

NAS1611-010

Purchased No

230

Each

161.0000

8

8

**\*NAS1611-010\***

O-RING

\*\*

all 16/12/16

Location

Loc Qty

Loc Code

FP001

161

11136245

yo

m134955

7

m135603

154

D2741

Manufactured No

250

Each

60.0000

1

1

**\*D2741\***

Replacement Blade

\*\*

DAS 26 9-89

D/ 2 9-

Location

Loc Qty

Loc Code

FG

10

131616

10

ST538

50

132981

15

148028

35

DEC 20 2016

DAS 27 9-89

1x

# Picklist Print

Monday, November 21, 2016 9:28:21 AM

Work Order ID: 153453

**\*153453\***

Parent Item: D350-636-012

**\*D350-636-012\***

Parent Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/5/2016

Start Qty: 1.00

Required Qty: 1.00

NAS1515H3L

Purchased

No

230

Each

175.0000

4

4

**\*NAS1515H3I \***

Washer

**\*\***

*16/11/13*

Location

Loc Qty

Loc Code

FG

40

102472

40

FP001

31

m127831

20

m134508

11

ST260a

100

m135600

100

*✓4*

ST266

4

m130726

4

NAS1611-013

Purchased

No

230

Each

227.0000

8

8

**\*NAS1611-013\***

O-Ring

**\*\***

*16/12/19*

Location

Loc Qty

Loc Code

FP001

227

m134676

30

m135544

93

m135603

104

*✓8*

# Picklist Print

Monday, November 21, 2016 9:28:21 AM

Work Order ID: 153453

**\*153453\***

Parent Item: D350-636-012

**\*D350-636-012\***

Parent Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/5/2016

Start Qty: 1.00

Required Qty: 1.00

AN3C6A Purchased No 230 Each 177.0000 4 4

**\*AN3C6A\***

Bolt

\*\*

del 16/12/13

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| FG       | 10      | 11136295 |
| 122416   | 10      | x4       |
| FP001    | 72      |          |
| m135704  | 72      |          |
| OVER002  | 60      |          |
| m135442  | 60      |          |
| ST349    | 35      |          |
| m128704  | 27      |          |
| m132767  | 2       |          |
| m133077  | 6       |          |

NAS1149C0832R Purchased No 230 Each 125.0000 1 1

**\*NAS1149C0832R\***

Washer

\*\*

del 16/12/13

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| FP001    | 23      |          |
| m125807  | 23      |          |
| ST265    | 102     |          |
| m135536  | 102     | x1       |

D3536-25 Manufactured No 230 Each 19.0000 1 1

**\*D3536-25\***

Gasket Center

\*\*

del 16/12/13

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| FG       | 6       | 13153641 |
| 87053    | 2       | x1       |
| 95328    | 4       |          |
| FP001    | 13      |          |
| 146747   | 2       |          |
| 150578   | 11      |          |



# Picklist Print

Monday, November 21, 2016 9:28:21 AM

Work Order ID: 153453

**\*153453\***

Parent Item: D350-636-012

**\*D350-636-012\***

Parent Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/5/2016

Start Qty: 1.00

Required Qty: 1.00

D3794-3

Manufactured No

230

Each

25.0000

1

1

**\*D3794-3\***

Gasket Aft

**\*\***

*11/16/12/13*

Location

Loc Qty

Loc Code

FP001

25

147325

1

150181

13

150612

11

*x1*

AN3C5A

Purchased

No

230

Each

1,248.000

34

34

**\*AN3C5A\***

Bolt

**\*\***

*11/16/12/13*

Location

Loc Qty

Loc Code

FG

5

122800

5

FP001

130

M135603

130

OVER002

900

M135948

400

M136047

500

ST350

213

M134676

13

M135442

200

*11136295*

*x34*

# Picklist Print

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Monday, November 21, 2016 9:28:21 AM

Work Order ID: 153453

**\*153453\***

Parent Item: D350-636-012

**\*D350-636-012\***

Parent Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/5/2016

Start Qty: 1.00

Required Qty: 1.00

D3537-1

Manufactured No

230

Each

145.0000

3

3

**\*D3537-1\***

Wearpad

\*\*

JL 16/12/13

LocationLoc QtyLoc Code

FG

14

79833

4

88562

10

FP001

130

141922

7

147593

36

150462

34

150709

1

151518

52

ST184

1

125911

1

X3

D3535-25

Manufactured No

230

Each

15.0000

1

1

**\*D3535-25\***

Wearplate Center

\*\*

JL 16/12/13

LocationLoc QtyLoc Code

FG

4

139987

1

148669

1

95077

2

FP002

11

148669

3

150650

8

B153991

X1

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Shop Packet Print

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# Picklist Print

Monday, November 21, 2016 9:28:21 AM

Work Order ID: 153453

**\*153453\***

Parent Item: D350-636-012

**\*D350-636-012\***

Parent Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/5/2016

Start Qty: 1.00

Required Qty: 1.00

D3492-3

Manufactured No

230

Each

154.0000

8

8

**\*D3492-3\***

Plug

\*\*

Location

Loc Qty

Loc Code

FP001

154

142869

3

147535

26

150361

125

B153792

x5

x3

NAS1149C0332R

Purchased

No

230

Each

3,522.000

38

38

**\*NAS1149C0332R\***

WASHER

\*\*

Location

Loc Qty

Loc Code

FP001

880

m135672

568

m135948

312

GA

86

m133284

86

ST260a

1500

m135466

1000

m136042

500

ST266

1056

m135408

356

m135766

500

m135908

200

M1136199

x38

D3488-042

Manufactured

No

230

Each

12.0000

1

1

**\*D3488-042\***

Blade Fitting RH

\*\*

Location

Loc Qty

Loc Code

FP001

12

144738

2

148618

4

150126

6

x1

Monday, November 21, 2016 9:28:21 AM

Shop Packet Print

# Picklist Print

Monday, November 21, 2016 9:28:21 AM

Work Order ID: 153453

**\*153453\***

Parent Item: D350-636-012

**\*D350-636-012\***

Parent Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/5/2016

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-225 AEELS8-1032-225 Purchased No 230 Each 5,207.000 38 38

**\*AI S4-1032-225\***

Rivnut

**\*\***

*all 10/12/13*

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| CCK007          | 5000           |                 |
| M135998         | 5000           |                 |
| FG              | 20             |                 |
| M134975         | 20             |                 |
| FP001           | 187            |                 |
| M135603         | 40             |                 |
| M135920         | 147            |                 |

*x38*

D3492-1 Manufactured No 230 Each 135.0000 8 8

**\*D3492-1\***

Plug

**\*\***

*all 10/12/14*

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| FP001           | 135            |                 |
| 148723          | 4              |                 |
| 150701          | 131            |                 |

*13153818*

*x8*

D3793-1 Manufactured No 230 Each 17.0000 1 1

**\*D3793-1\***

Wearplate Fwd

**\*\***

*all 10/12/15*

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| FP002           | 17             |                 |
| 148647          | 5              |                 |
| 150194          | 12             |                 |

*13153478*

*x1*



# Picklist Print

Monday, November 21, 2016 9:28:21 AM

Work Order ID: 153453

**\*153453\***

Parent Item: D350-636-012

**\*D350-636-012\***

Parent Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/5/2016

Start Qty: 1.00

Required Qty: 1.00

|                  |           |    |     |      |         |   |   |           |                         |
|------------------|-----------|----|-----|------|---------|---|---|-----------|-------------------------|
| AN8C35A          | Purchased | No | 230 | Each | 64.0000 | 1 | 1 | <b>**</b> | <i>all not in stock</i> |
| <b>*AN8C35A*</b> |           |    |     |      |         |   |   |           |                         |
| Bolt             |           |    |     |      |         |   |   |           |                         |

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| FG              | 5              |                 |
| 121275          | 5              |                 |
| FP001           | 29             |                 |
| m133336         | 15             |                 |
| m134130         | 14             |                 |
| over005         | 30             |                 |
| m134131         | 15             |                 |
| m134133         | 15             |                 |

|                    |           |    |     |      |         |   |   |           |                     |
|--------------------|-----------|----|-----|------|---------|---|---|-----------|---------------------|
| MS21083C8          | Purchased | No | 230 | Each | 81.0000 | 1 | 1 | <b>**</b> | <i>all 10/12/13</i> |
| <b>*MS21083C8*</b> |           |    |     |      |         |   |   |           |                     |
| Nut                |           |    |     |      |         |   |   |           |                     |

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| FP001           | 14             |                 |
| m135603         | 14             |                 |
| ST297           | 67             |                 |
| m135297         | 25             |                 |
| m135470         | 2              |                 |
| m136047         | 40             |                 |

|                |              |    |     |      |         |   |   |           |                     |
|----------------|--------------|----|-----|------|---------|---|---|-----------|---------------------|
| D2745          | Manufactured | No | 230 | Each | 38.0000 | 8 | 8 | <b>**</b> | <i>all 10/12/13</i> |
| <b>*D2745*</b> |              |    |     |      |         |   |   |           |                     |
| Bushing        |              |    |     |      |         |   |   |           |                     |

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| FP001           | 38             |                 |
| 129584          | 7              |                 |
| 136214          | 2              |                 |
| 145904          | 29             |                 |

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Work Order ID: 153453

**\*153453\***

Parent Item: D350-636-012

**\*D350-636-012\***

Parent Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/5/2016

Start Qty: 1.00

Required Qty: 1.00

AN6C44A

Purchased

No

230

Each

376.0000

4

4

**\*AN6C44A\***

Bolt

\*\*

10/12/13

Location

Loc Qty

Loc Code

FP001

62

131649

50

m132556

12

over009

314

m132556

210

m135718

52

m135719

52

X4

D3532-1

Manufactured

No

250

Each

35.0000

2

2

**\*D3532-1\***

Spacer

\*\*

DAS 26 28 9-89 9-89

Location

Loc Qty

Loc Code

ST041

35

144630

5

150708

30

2x

DEC 20 2016

MS21083C8

Purchased

No

250

Each

81.0000

2

2

**\*MS21083C8\***

Nut

\*\*

DAS 26 28 9-89 9-89

Location

Loc Qty

Loc Code

FP001

14

m135603

14

ST297

67

m135297

25

m135470

2

m136047

40

2x.

DEC 20 2016

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# Picklist Print

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Monday, November 21, 2016 9:28:21 AM

Work Order ID: 153453

**\*153453\***

Parent Item: D350-636-012

**\*D350-636-012\***

Parent Item Name: Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 11/21/2016

Required Date: 12/5/2016

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0863J

Purchased

No

250

Each

426.0000

2

2

**\*NAS1149D0863J\***

Washer

**\*\***

DAS 26 28 9-89 7-89

Location

Loc Qty

Loc Code

FP001

46

125484

46

ST260a

100

125635

100

ST263

280

125268

280

D3493-1

Manufactured

No

250

Each

46.0000

2

**\*D3493-1\***

Washer

**\*\***

2x  
2  
B153790

DAS 26 28 9-89 7-89

Location

Loc Qty

Loc Code

FG

10

97201

10

ST039

36

140678

16

150677

20

\*\*\*ONLY INSTALL IF INSTALLING ON APICAL  
FLOAT SYSTEM\*\*\*

AN8C21A

Purchased

No

250

Each

28.0000

2

**\*AN8C21A\***

Bolt

**\*\***

2  
m136262

DAS 26 28 9-89 9-81

Location

Loc Qty

Loc Code

FG

4

123966

2

m132169

2

ST332

24

m132169

2

m132522

1

m134590

21

DAS 27 9-89

DEC 2 0 2016

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| QTY<br>-041 | QTY<br>-042 | QTY<br>-043 | QTY<br>-044 | PART NUMBER   | DESCRIPTION                                             |
|-------------|-------------|-------------|-------------|---------------|---------------------------------------------------------|
| X           |             |             |             | D2750-041     | 350 SKIDTUBE ASSEMBLY, LH                               |
|             | X           |             |             | D2750-042     | 350 SKIDTUBE ASSEMBLY, RH                               |
|             |             | X           |             | D2750-043     | 350 SKIDTUBE ASSEMBLY, LH                               |
|             |             |             | X           | D2750-044     | 350 SKIDTUBE ASSEMBLY, RH                               |
| 1           | 1           | 1           | 1           | D2739         | WEB                                                     |
| 8           | 8           | 8           | 8           | D2743         | SPACER                                                  |
| 1           | 1           | 1           | 1           | D2744         | CAP                                                     |
| 8           | 8           | 8           | 8           | D2745         | BUSHING                                                 |
| 1           |             |             |             | D2750-1       | SKIDTUBE WELDMENT, LH                                   |
|             | 1           |             |             | D2750-2       | SKIDTUBE WELDMENT, RH                                   |
|             |             | 1           |             | D2750-3       | SKIDTUBE WELDMENT, LH                                   |
|             |             |             | 1           | D2750-4       | SKIDTUBE WELDMENT, RH                                   |
| 1           |             | 1           |             | D3488-041     | BLADE FITTING, LH                                       |
|             | 1           |             |             | D3488-042     | BLADE FITTING, RH                                       |
| 4           | 4           | 4           | 4           | D3490-1       | SPACER                                                  |
| 4           | 4           |             |             | D3490-3       | SPACER                                                  |
|             |             | 4           | 4           | D3490-5       | SPACER                                                  |
| 8           | 8           | 8           | 8           | D3492-041     | PLUG ASSEMBLY                                           |
| 8           | 8           |             |             | D3492-043     | PLUG ASSEMBLY                                           |
|             |             | 8           | 8           | D3492-045     | PLUG ASSEMBLY                                           |
| 1           | 1           | 1           | 1           | D3535-25      | WEARSHOE                                                |
| 1           | 1           | 1           | 1           | D3536-25      | GASKET                                                  |
| 3           | 3           | 3           | 3           | D3537-1       | WEARPAD                                                 |
| 8           | 8           | 8           | 8           | D3631-1       | WASHER                                                  |
| 1           | 1           | 1           | 1           | D3791-1       | WEARPLATE                                               |
| 1           | 1           | 1           | 1           | D3793-1       | WEARSHOE                                                |
| 1           | 1           | 1           | 1           | D3793-3       | WEARSHOE                                                |
| 1           | 1           | 1           | 1           | D3794-1       | GASKET                                                  |
| 1           | 1           | 1           | 1           | D3794-3       | GASKET                                                  |
| 38          | 38          | 38          | 38          | ALS4-1032-225 | INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225) |
| 34          | 34          | 34          | 34          | AN3C5A        | BOLT                                                    |
| 4           | 4           | 4           | 4           | AN3C6A        | BOLT                                                    |
| 4           | 4           | 4           | 4           | AN6C44A       | BOLT                                                    |
| 1           | 1           | 1           | 1           | AN8C35A       | BOLT                                                    |
| 38          | 38          | 38          | 38          | AN960C10L     | WASHER                                                  |
| 1           | 1           | 1           | 1           | AN960C816L    | WASHER                                                  |
| 4           | 4           | 4           | 4           | MS21043-6     | NUT                                                     |
| 1           | 1           | 1           | 1           | MS21083C8     | NUT                                                     |
| 4           | 4           | 4           | 4           | NAS1515H3L    | WASHER                                                  |

# **GENERAL NOTES:**

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH: ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.  
STANDARD: PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2  
OPTIONAL: POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES (Ø0.297) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:  
MINIMUM YIELD TENSILE STRENGTH = 35 KSI  
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF  
FINISH WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER

NO. 153453 MLJ  
16-11-21

RELEASED  
2013-08-13  
ND

|            |                                                                                                                                                                                                                                                                                                                                                                                      |    |          |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----------|
| G          | CORRECTED TOLERANCE ON Ø0.500 THRU HOLE: IS +0.010/-0.000, WAS +0.100/-0.000 (ZN B3-4, B2-5); ADD VIEW TO CONTROL FWD BEND ORIENTATION (ZN D-1-4/-5-6/-7); UPDATED FINISH OPTIONS; INSIDE OF TUBE NO LONGER SPRAYED WITH LPS-3. REASON: PART13-276 AND NCR13-2757.                                                                                                                   | MB | 13.07.11 |
| F          | INCORPORATE DSI 9413: QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/-3 REPLACES D3535-13/-35 (ZN C8-1); D3794-1/-3 REPLACES D3536-13/-35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL); WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043 | PH | 08.07.16 |
| E          | CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741, QTY (2) AN960C816; REMOVE QTY (2) MS21083C8                                                                                                                                                                             | CB | 07.05.17 |
| D          | ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157                                                                                                                                                                                                                                                                                                                   | PH | 06.01.05 |
| C          | ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740                                                                                                                                                                                                                                                                                                                                     | CP | 98.11.18 |
| B          | CHANGE MS24894-S293 TO AN8-16A                                                                                                                                                                                                                                                                                                                                                       | CP | 98.09.01 |
| A          | NEW ISSUE                                                                                                                                                                                                                                                                                                                                                                            | DS | 98.04.16 |
| REV.       | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                          | BY | DATE     |
| DESIGN     | MM                                                                                                                                                                                                                                                                                                                                                                                   |    |          |
| DRAWN      |                                                                                                                                                                                                                                                                                                                                                                                      |    |          |
| CHECKED    |                                                                                                                                                                                                                                                                                                                                                                                      |    |          |
| MFG. APPR. |                                                                                                                                                                                                                                                                                                                                                                                      |    |          |
| APPROVED   |                                                                                                                                                                                                                                                                                                                                                                                      |    |          |
| DE APPR.   |                                                                                                                                                                                                                                                                                                                                                                                      |    |          |
| DATE       | 13.07.11                                                                                                                                                                                                                                                                                                                                                                             |    |          |

**DART AEROSPACE USA, INC.**

KENT, WA

DRAWING NO.

D2750

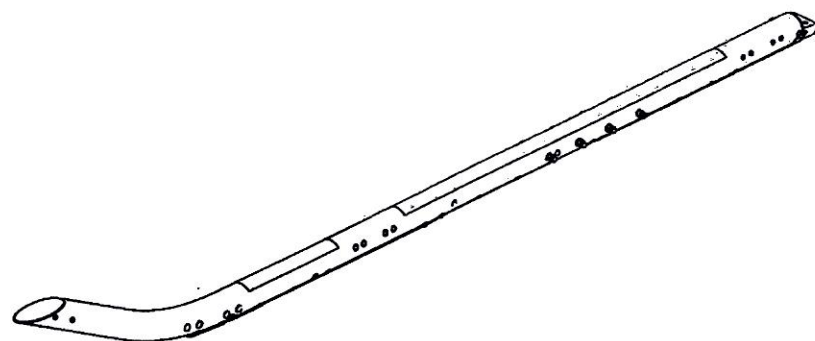
TITLE

350 SKIDTUBE ASSEMBLY

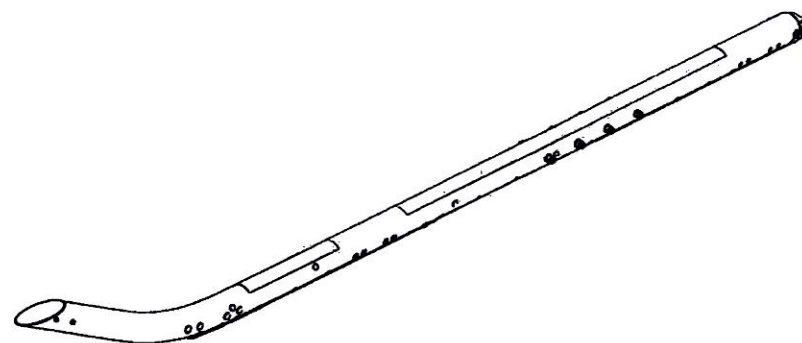
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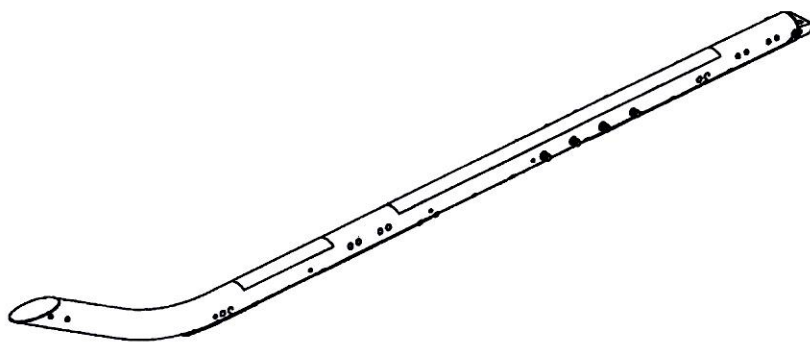
**D2750-041 350 SKIDTUBE ASSEMBLY, LH**



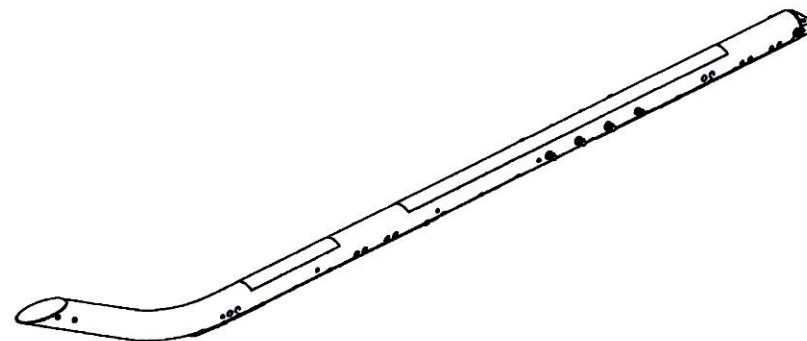
**D2750-042 350 SKIDTUBE ASSEMBLY, RH**

**RELEASED**  
2013-08-13  
*MP*

|            |                    |                                                                                                                                                                                                                                                                                          |        |
|------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| DESIGN     | MM                 | <b>DART AEROSPACE USA, INC.</b>                                                                                                                                                                                                                                                          |        |
| DRAWN      | <i>[Signature]</i> | KENT, WA                                                                                                                                                                                                                                                                                 |        |
| CHECKED    | <i>[Signature]</i> | DRAWING NO. <b>D2750</b>                                                                                                                                                                                                                                                                 | REV. G |
| MFG. APPR. | <i>[Signature]</i> | SHEET 2 OF 11                                                                                                                                                                                                                                                                            |        |
| APPROVED   | <i>[Signature]</i> | TITLE                                                                                                                                                                                                                                                                                    | SCALE  |
| DE APPR.   | <i>[Signature]</i> | <b>350 SKIDTUBE ASSEMBLY</b>                                                                                                                                                                                                                                                             | NTS    |
| DATE       | <b>13.07.11</b>    | <small>COPYRIGHT © 1999 BY DART AEROSPACE USA, INC.<br/>THIS DOCUMENT IS PRELIMINARY AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR FOR ANY OR COMBINATION OF ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE USA, INC.</small> |        |



**D2750-043 350 SKIDTUBE ASSEMBLY, LH**

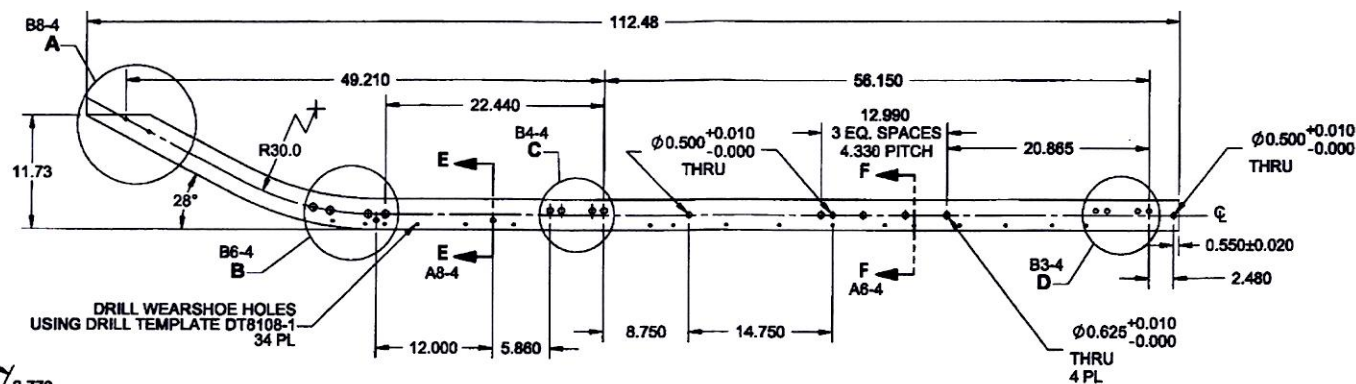


**D2750-044 350 SKIDTUBE ASSEMBLY, RH**

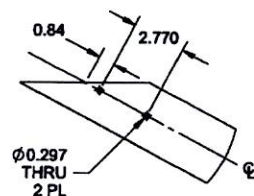
**RELEASED**  
2013-08-13  
*ND*

|            |                    |                                                                                                                                                                                                                                                                                                     |        |
|------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| DESIGN     | MM                 | <b>DART AEROSPACE USA, INC.</b>                                                                                                                                                                                                                                                                     |        |
| DRAWN      | <i>[Signature]</i> | KENT, WA                                                                                                                                                                                                                                                                                            |        |
| CHECKED    | <i>[Signature]</i> | DRAWING NO. <b>D2750</b>                                                                                                                                                                                                                                                                            | REV. G |
| MFG. APPR. | <i>[Signature]</i> | SHEET 3 OF 11                                                                                                                                                                                                                                                                                       |        |
| APPROVED   | <i>[Signature]</i> | TITLE                                                                                                                                                                                                                                                                                               | SCALE  |
| DE APPR.   | <i>[Signature]</i> | <b>350 SKIDTUBE ASSEMBLY</b>                                                                                                                                                                                                                                                                        | NTS    |
| DATE       | <b>13.07.11</b>    | <small>COPYRIGHT © 1998 BY DART AEROSPACE USA, INC.<br/>THIS DOCUMENT IS PRESENT AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small> |        |

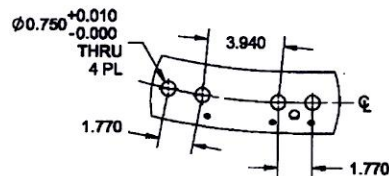
8 7 6 5 4 3 2 1



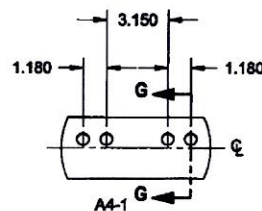
# **D2750-1 LH SKIDTUBE**



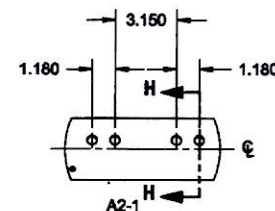
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SCALE 2X



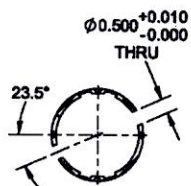
**DETAIL B**  
SCALE 2X



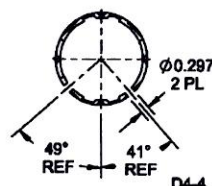
**DETAIL C**  
SCALE 2X



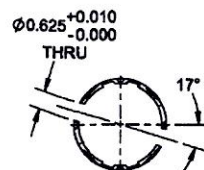
**DETAIL D**  
SCALE 2X



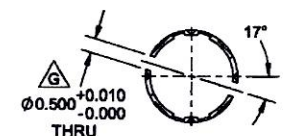
**SECTION E-E**  
SCALE 3X, 2 PL



**SECTION F-F**  
SCALE 3X, 17 PL



**SECTION G-G**  
SCALE 3X, 4 PL



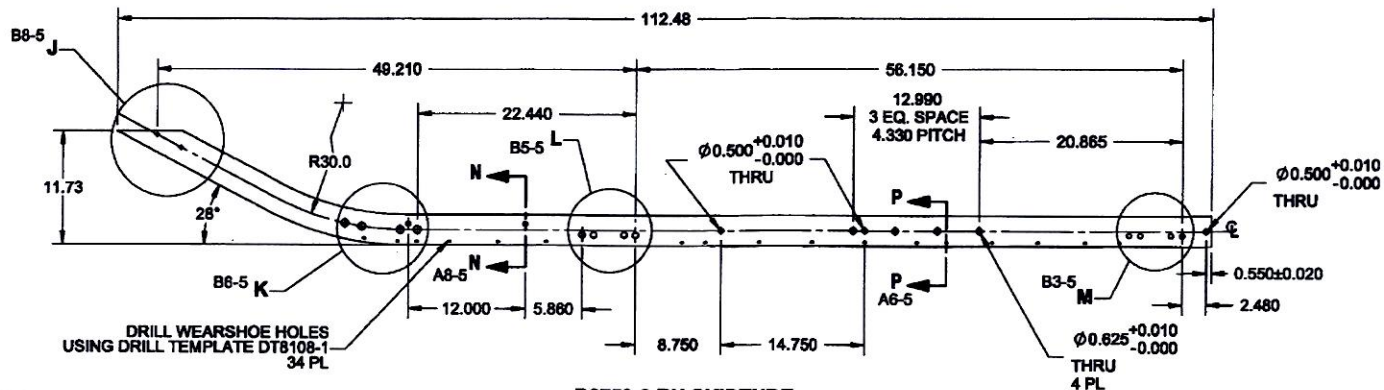
**SECTION H-H**  
SCALE 3X, 4 PL

**RELEASED**  
2013-08-13

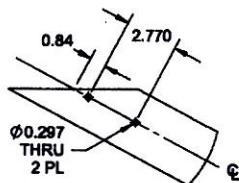
|            |          |                                 |        |
|------------|----------|---------------------------------|--------|
| DESIGN     | MM       | <b>DART AEROSPACE USA, INC.</b> |        |
| DRAWN      |          | KENT, WA                        |        |
| CHECKED    |          | DRAWING NO. <b>D2750</b>        | REV. G |
| MFG. APPR. |          | SHEET 4 OF 11                   |        |
| APPROVED   |          | TITLE                           | SCALE  |
| DE APPR.   |          | <b>350 SKIDTUBE ASSEMBLY</b>    |        |
| DATE       | 13.07.11 | NTS                             |        |

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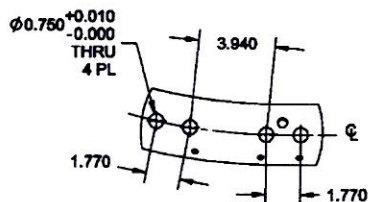
8 7 6 5 4 3 2 1



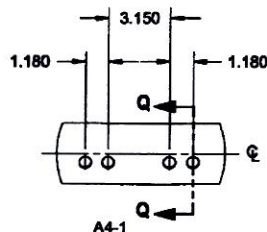
### D2750-2 RH SKIDTUBE



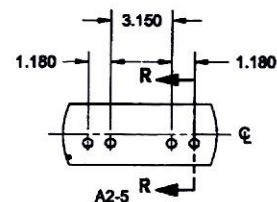
**DETAIL J**  
SCALE 2X



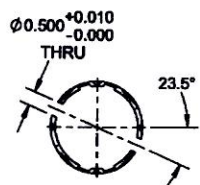
**DETAIL K**  
SCALE 2X



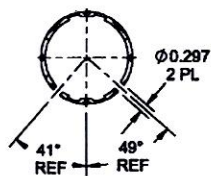
**DETAIL L**  
SCALE 2X



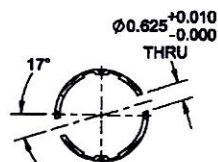
**DETAIL M**  
SCALE 2X



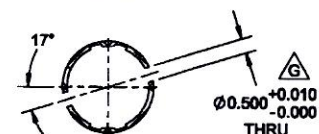
**SECTION N-N**  
SCALE 3X, 2 PL



**SECTION P-P**  
SCALE 3X, 17 PL



**SECTION Q-Q**  
SCALE 3X, 4 PL



**SECTION R-R**  
SCALE 3X, 4 PL

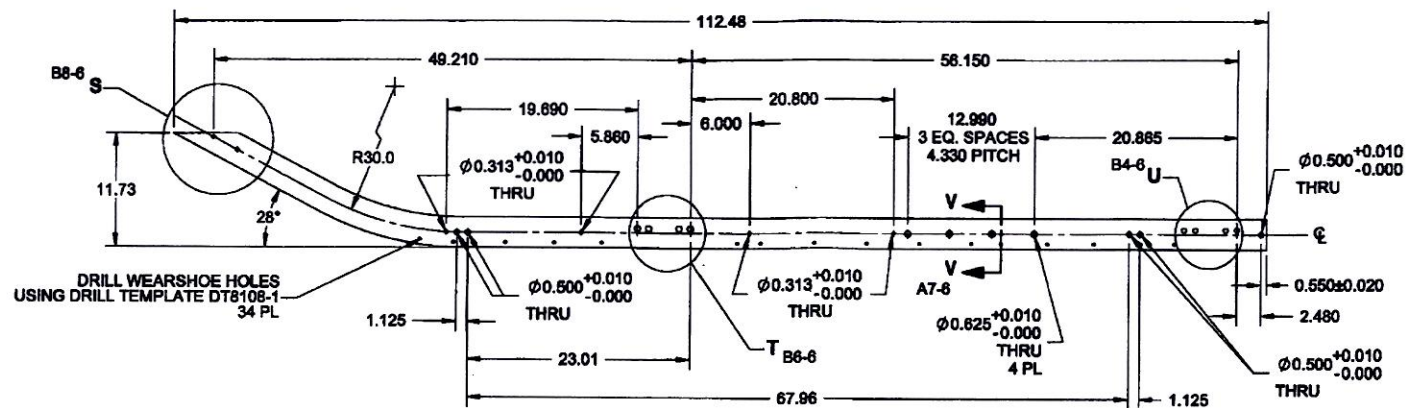
|            |          |                                 |        |
|------------|----------|---------------------------------|--------|
| DESIGN     | MM       | <b>DART AEROSPACE USA, INC.</b> |        |
| DRAWN      |          | KENT, WA                        |        |
| CHECKED    |          | DRAWING NO. <b>D2750</b>        | REV. G |
| MFG. APPR. |          | SHEET 5 OF 11                   |        |
| APPROVED   |          | TITLE                           | SCALE  |
| DE APPR.   |          | <b>350 SKIDTUBE ASSEMBLY</b>    |        |
| DATE       | 13.07.11 | NTS                             |        |

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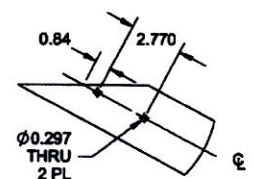
**RELEASED**  
2013-08-13



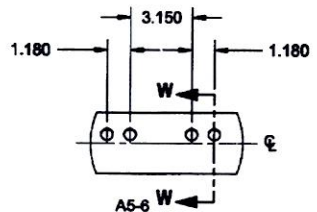
8 7 6 5 4 3 2 1



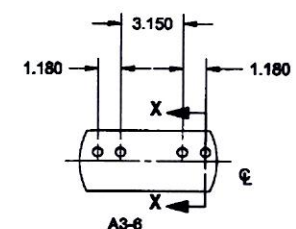
**D2750-3 LH SKIDTUBE**



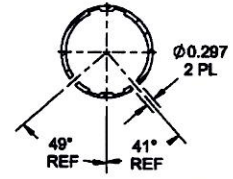
**DETAIL S**  
SCALE 2X



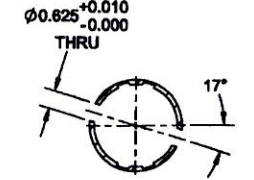
**DETAIL T**  
SCALE 2X



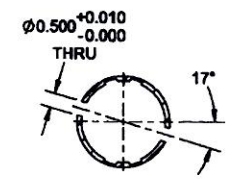
**DETAIL U**  
SCALE 2X



**SECTION V-V**  
SCALE 3X, 17 PL



**SECTION W-W**  
SCALE 3X, 4 PL



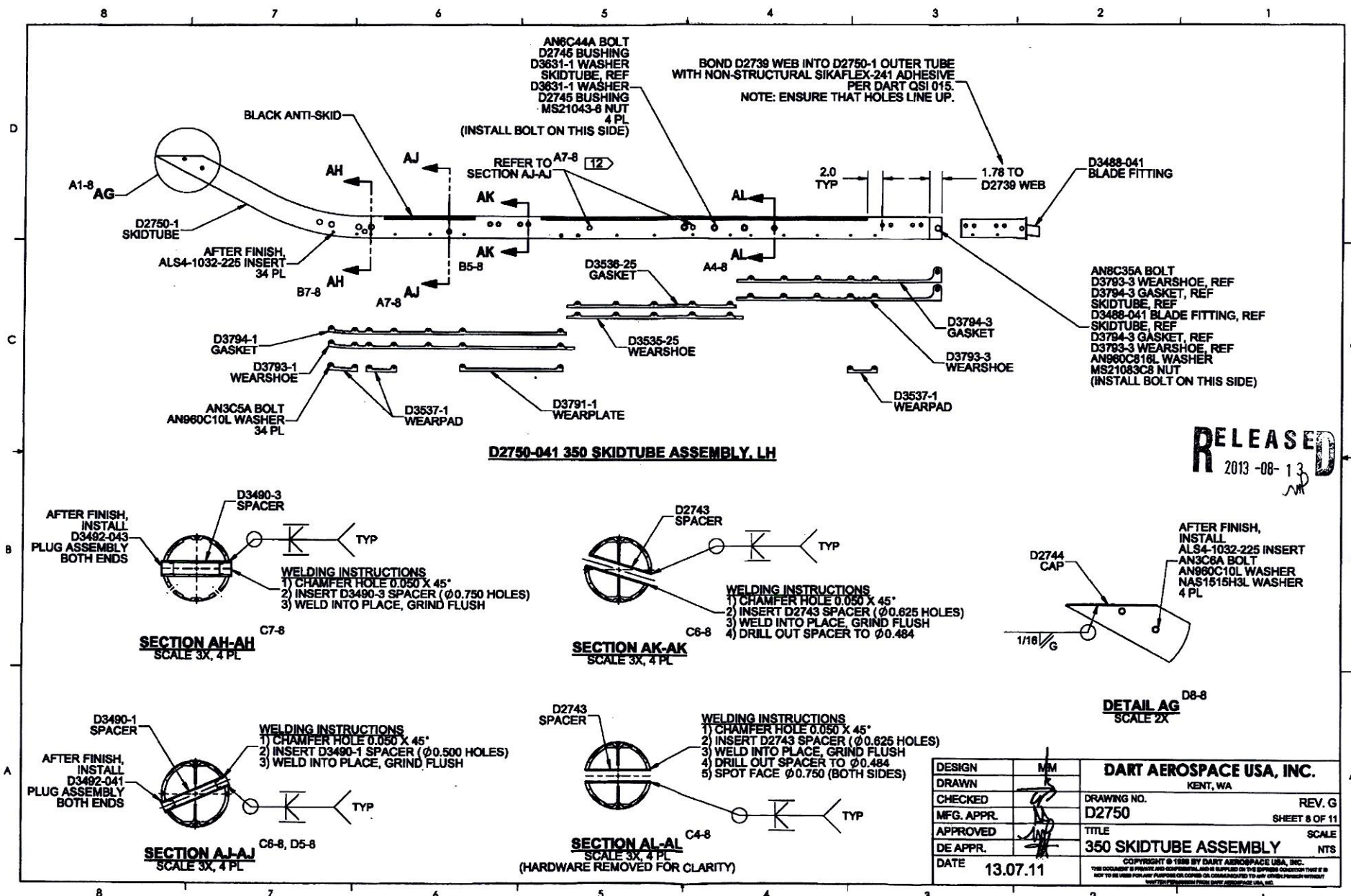
**SECTION X-X**  
SCALE 3X, 4 PL

**RELEASED**  
2013-08-13

|                                                                                                                                                                                                                                                                                                      |    |                                    |                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------------------------------------|------------------|
| DESIGN                                                                                                                                                                                                                                                                                               | MM | <b>DART AEROSPACE USA, INC.</b>    |                  |
| DRAWN                                                                                                                                                                                                                                                                                                |    | KENT, WA                           |                  |
| CHECKED                                                                                                                                                                                                                                                                                              |    | DRAWING NO. <b>D2750</b>           | REV. G           |
| MFG. APPR.                                                                                                                                                                                                                                                                                           |    | SHEET 8 OF 11                      |                  |
| APPROVED                                                                                                                                                                                                                                                                                             |    | TITLE <b>350 SKIDTUBE ASSEMBLY</b> | SCALE <b>NTS</b> |
| DE APPR.                                                                                                                                                                                                                                                                                             |    | DATE <b>13.07.11</b>               |                  |
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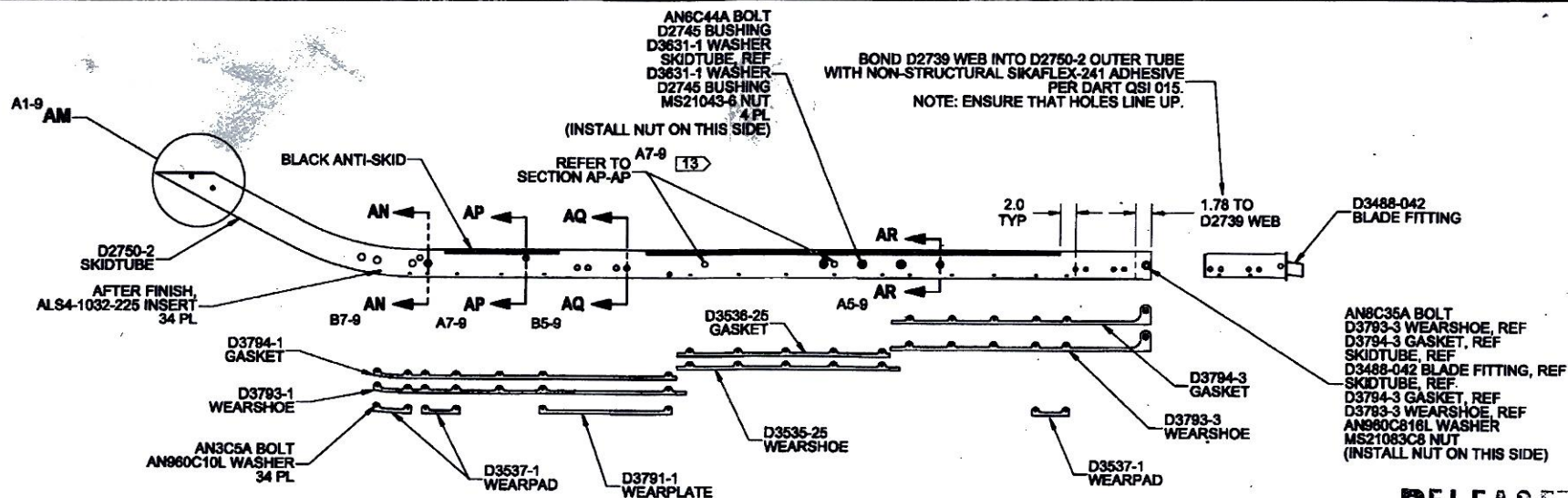
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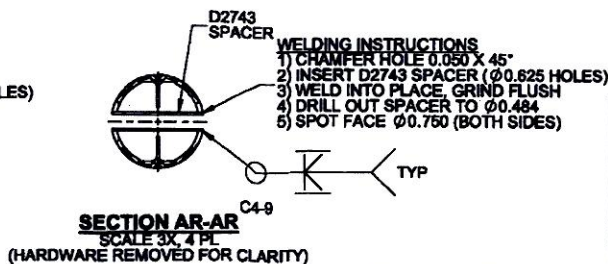
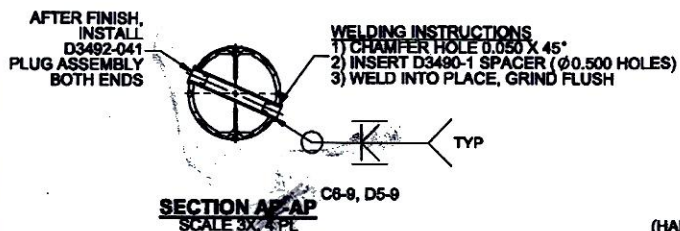
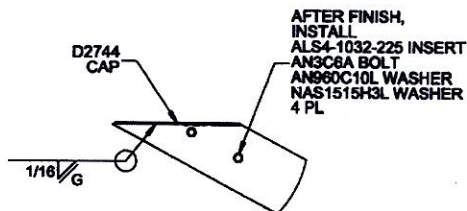
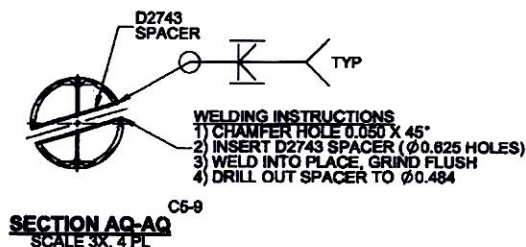
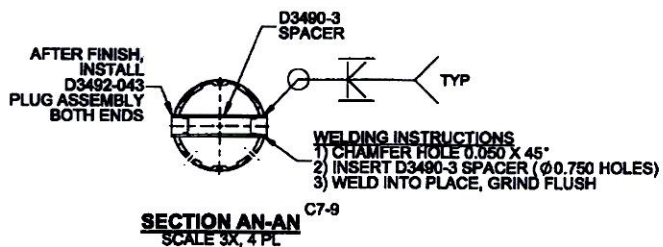


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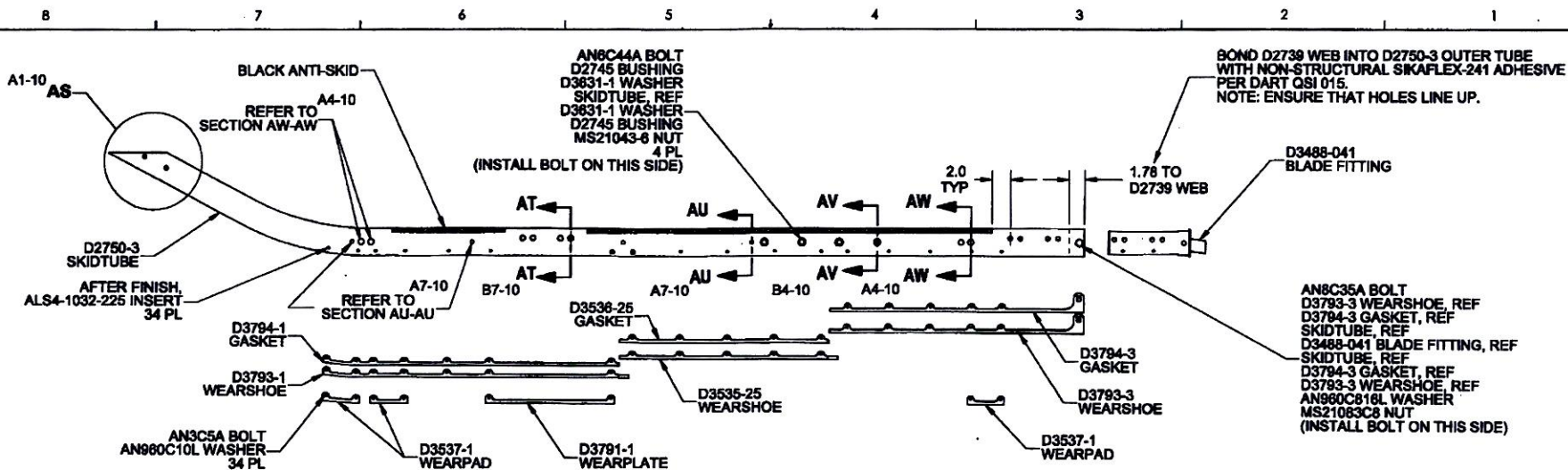
# **D2750-042 350 SKIDTUBE ASSEMBLY, RH**

**RELEASED**  
2013-08-13

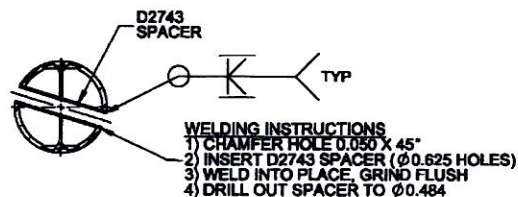


|            |          |                                                                                                                                                                |               |
|------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| DESIGN     | NM       | DART AEROSPACE USA, INC.                                                                                                                                       |               |
| DRAWN      |          | KENT, WA                                                                                                                                                       |               |
| CHECKED    |          | DRAWING NO.                                                                                                                                                    | REV. G        |
| MFG. APPR. |          | D2750                                                                                                                                                          | SHEET 9 OF 11 |
| APPROVED   |          | TITLE                                                                                                                                                          | SCALE         |
| DE APPR.   |          | 350 SKIDTUBE ASSEMBLY                                                                                                                                          | NTS           |
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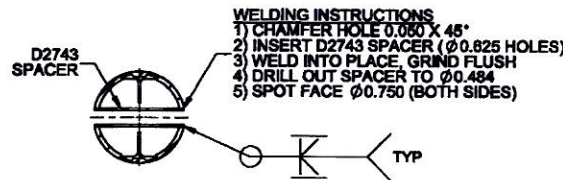




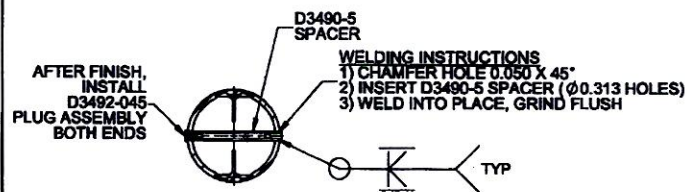
### D2750-043 350 SKIDTUBE ASSEMBLY, LH



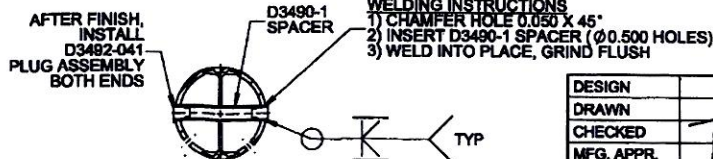
**SECTION AT-AT**  
SCALE 3X, 4 PL



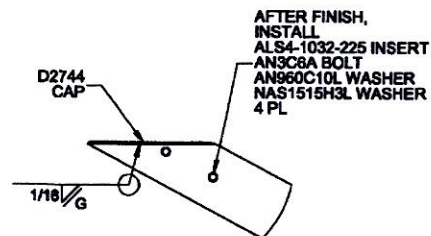
**SECTION AV-AV**  
SCALE 3X, 4 PL  
(HARDWARE REMOVED FOR CLARITY)



**SECTION AU-AU**  
SCALE 3X, 4 PL



**SECTION AW-AW**  
SCALE 3X, 4 PL

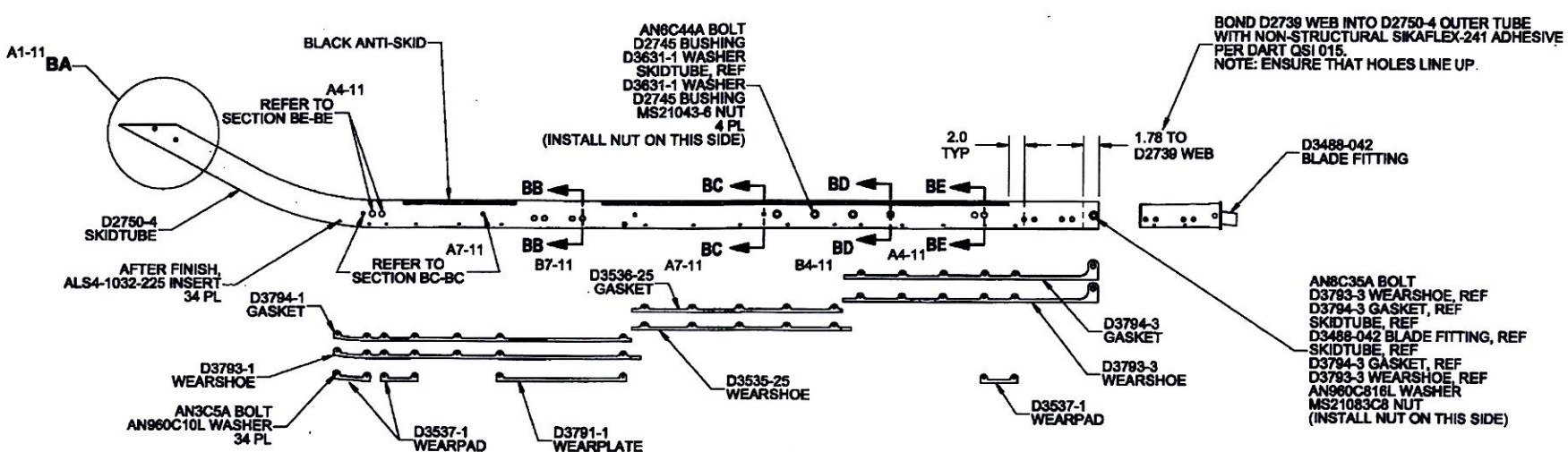


**DETAIL AS**  
SCALE 2X

|            |          |                                              |                |
|------------|----------|----------------------------------------------|----------------|
| DESIGN     | MM       | <b>DART AEROSPACE USA, INC.</b>              |                |
| DRAWN      |          | KENT, WA                                     |                |
| CHECKED    |          | DRAWING NO.                                  | REV. G         |
| MFG. APPR. |          | D2750                                        | SHEET 10 OF 11 |
| APPROVED   |          | TITLE                                        | SCALE          |
| DE APPR.   |          | 350 SKIDTUBE ASSEMBLY                        | NTS            |
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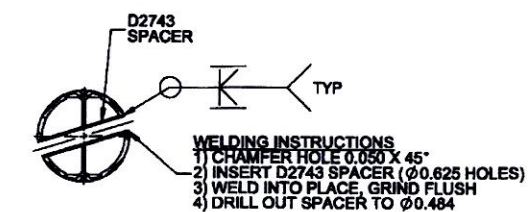
RELEASE  
2013-08-13

8 7 6 5 4 3 2 1

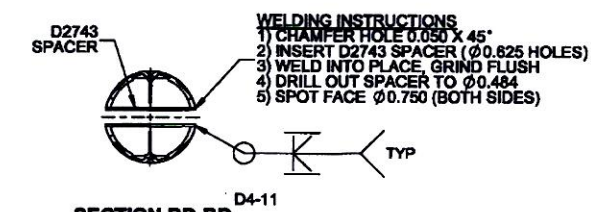


**D2750-044 350 SKIDTUBE ASSEMBLY, RH**

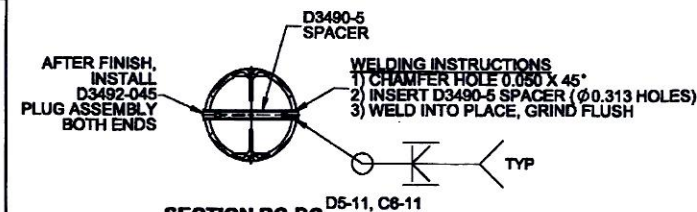
**RELEASED**  
2013-08-13



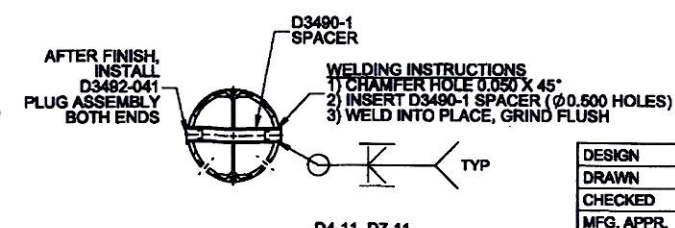
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SCALE 3X, 4 PL



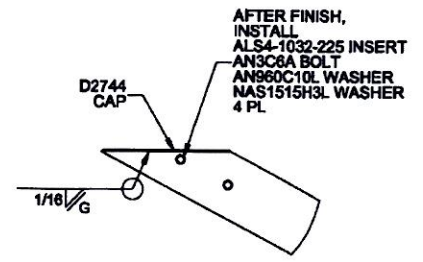
**SECTION BD-BD**  
SCALE 3X, 4 PL  
(HARDWARE REMOVED FOR CLARITY)



**SECTION BC-BC**  
SCALE 3X, 4 PL



**SECTION BE-BE**  
SCALE 3X, 4 PL

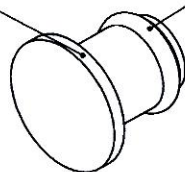


**DETAIL BA**  
SCALE 2X

|            |          |                                                                                                                                                                                                                                                   |                |
|------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| DESIGN     | MM       | <b>DART AEROSPACE USA, INC.</b>                                                                                                                                                                                                                   |                |
| DRAWN      |          | KENT, WA                                                                                                                                                                                                                                          |                |
| CHECKED    |          | DRAWING NO.                                                                                                                                                                                                                                       | REV. G         |
| MFG. APPR. |          | <b>D2750</b>                                                                                                                                                                                                                                      | SHEET 11 OF 11 |
| APPROVED   |          | TITLE                                                                                                                                                                                                                                             | SCALE          |
| DE APPR.   |          | <b>350 SKIDTUBE ASSEMBLY</b>                                                                                                                                                                                                                      | NTS            |
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D3492-XX PLUG  
(SEE TABLE)

NAS1611 O-RING  
(SEE TABLE)



### D3492-XXX PLUG PARTS LIST

| QTY<br>-041 | QTY<br>-043 | QTY<br>-045 | QTY<br>-047 | QTY<br>-049 | QTY<br>-051 | QTY<br>-053 | QTY<br>-055 | PART NUMBER | DESCRIPTION   |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|
| X           |             |             |             |             |             |             |             | D3492-041   | PLUG ASSEMBLY |
|             | X           |             |             |             |             |             |             | D3492-043   | PLUG ASSEMBLY |
|             |             | X           |             |             |             |             |             | D3492-045   | PLUG ASSEMBLY |
|             |             |             | X           |             |             |             |             | D3492-047   | PLUG ASSEMBLY |
|             |             |             |             | X           |             |             |             | D3492-049   | PLUG ASSEMBLY |
|             |             |             |             |             | X           |             |             | D3492-051   | PLUG ASSEMBLY |
|             |             |             |             |             |             | X           |             | D3492-053   | PLUG ASSEMBLY |
|             |             |             |             |             |             |             | X           | D3492-055   | PLUG ASSEMBLY |
| 1           |             |             |             |             |             |             |             | D3492-1     | PLUG          |
|             | 1           |             |             |             |             |             |             | D3492-3     | PLUG          |
|             |             | 1           |             |             |             |             |             | D3492-5     | PLUG          |
|             |             |             | 1           |             |             |             |             | D3492-7     | PLUG          |
|             |             |             |             | 1           |             |             |             | D3492-9     | PLUG          |
|             |             |             |             |             | 1           |             |             | D3492-11    | PLUG          |
|             |             |             |             |             |             | 1           |             | D3492-13    | PLUG          |
|             |             |             |             |             |             |             | 1           | D3492-15    | PLUG          |
|             |             | 1           |             |             |             |             |             | NAS1611-005 | O-RING        |
|             |             |             | 1           |             |             |             |             | NAS1611-007 | O-RING        |
| 1           |             |             |             |             |             |             |             | NAS1611-010 | O-RING        |
|             | 1           |             |             |             |             |             |             | NAS1611-012 | O-RING        |
|             |             |             |             |             |             |             |             | NAS1611-013 | O-RING        |
|             |             |             |             |             | 1           |             |             | NAS1611-015 | O-RING        |
|             |             |             |             | 1           |             |             |             | NAS1611-016 | O-RING        |

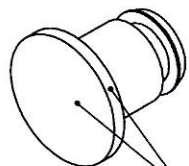
#### NOTES:

1) O-RING: POSSIBLE SUPPLIER P/N: NAS1611-XXX OR PARKER 2-XXX

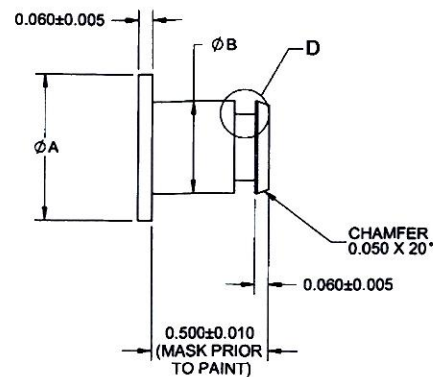
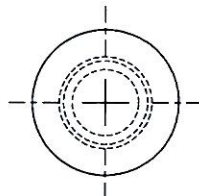
RELEASED  
2013-11-13

|            |                                                                           |                                                                                                                                                                                                                                                                           |              |
|------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| E          | ADD -055 PLUG ASSY & -15 PLUG                                             | AP                                                                                                                                                                                                                                                                        | 13.08.08     |
| D          | INCORPORATED DEO D3492-C-1. SHT 2 DIM C FOR -1 WAS 0.055. (SEE CAR11-048) | AJS                                                                                                                                                                                                                                                                       | 11.05.24     |
| C          | ADD -049/-051/-053, CHANGE DRAWING FORMAT                                 | PH                                                                                                                                                                                                                                                                        | 07.10.05     |
| B          | ADD -047, UPDATE DIM A FOR -045                                           | PH                                                                                                                                                                                                                                                                        | 06.05.11     |
| A          | NEW ISSUE                                                                 | PH                                                                                                                                                                                                                                                                        | 06.01.04     |
| REV.       | DESCRIPTION                                                               | BY                                                                                                                                                                                                                                                                        | DATE         |
| DESIGN     | PH                                                                        | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                  |              |
| DRAWN      | AP                                                                        |                                                                                                                                                                                                                                                                           |              |
| CHECKED    | AJS                                                                       | DRAWING NO.                                                                                                                                                                                                                                                               | REV. E       |
| MFG. APPR. | PH                                                                        | D3492                                                                                                                                                                                                                                                                     | SHEET 1 OF 2 |
| APPROVED   | PH                                                                        | TITLE                                                                                                                                                                                                                                                                     | SCALE        |
| DE APPR.   | PH                                                                        | PLUG                                                                                                                                                                                                                                                                      | NTS          |
| DATE       | 13.08.08                                                                  | COPYRIGHT © 2007 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. |              |

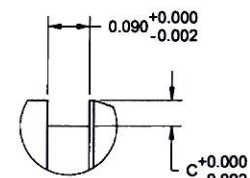




POWDER COAT THESE  
FACES ONLY PER NOTE 2



**D3492-XX PLUG**



**DETAIL D**

**D3492-XX PLUG MACHINING DETAILS**

| P/N      | A     | B     | C     | MATERIAL SPEC |
|----------|-------|-------|-------|---------------|
| D3492-1  | 0.625 | 0.394 | 0.050 | M6061T6R0.625 |
| D3492-3  | 0.750 | 0.582 | 0.045 | M6061T6R0.750 |
| D3492-5  | 0.375 | 0.188 | 0.045 | M6061T6R0.375 |
| D3492-7  | 0.500 | 0.270 | 0.045 | M6061T6R0.500 |
| D3492-9  | 0.938 | 0.750 | 0.045 | M6061T6R1.000 |
| D3492-11 | 0.850 | 0.664 | 0.045 | M6061T6R0.875 |
| D3492-13 | 0.750 | 0.510 | 0.045 | M6061T6R0.750 |
| D3492-15 | 0.850 | 0.640 | 0.050 | M6061T6R0.875 |

△

**NOTES:**

- 1) MATERIAL: ALUMINUM 5052-H32 OR 6061-T6 OR 1100-0 PER QQ-A-225/7 (5052) OR QQ-A-225/8 (6061) OR QQ-A-200/8 (6061) OR QQ-A-225/1 (1100) (REF. DART MATERIAL SPEC M6061T6R0.000)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT WHITE GLOSS (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A

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2013-11-13

|            |          |                                                                                                                                                                                                                                                                          |              |
|------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     | PH       | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                |              |
| DRAWN      | AP       | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                              |              |
| CHECKED    | ALS      | DRAWING NO.                                                                                                                                                                                                                                                              | REV. E       |
| MFG. APPR. | DS       | D3492                                                                                                                                                                                                                                                                    | SHEET 2 OF 2 |
| APPROVED   | AP       | TITLE                                                                                                                                                                                                                                                                    | SCALE        |
| DE APPR.   | AP       | PLUG                                                                                                                                                                                                                                                                     | 4:1          |
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